QuickNotes

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UGC NET Paper 2

Indian Knowledge System (103)
Complete revision notes — all 10 units

10 units | Tables & formulas | Key revision points

01 Introduction to IKS
02 Language and Grammar
03 Mathematics
04 Astronomy
05 Health Sciences
06 Philosophy and Logic
07 Science, Metallurgy and Technology
08 Architecture and Town Planning
09 Polity, Economy and Society
10 Arts, Agriculture and Environment

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Ten units of focused revision notes. Each unit ends with a box of key revision points.

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How to use these notes

- Read one unit at a time, then test yourself with its key revision points.
- Make your own short notes on topics you find difficult.
- Units follow the main areas of the official syllabus — the exact unit list can change between sessions.
- Always check the latest syllabus and notices on the official UGC NET portal: **ugcnet.nta.ac.in**.

UNIT 01

Introduction to IKS

Meaning, scope and sources of Indian knowledge systems.

- IKS division set up in the Ministry of Education (2020); NEP 2020 promotes IKS.
- Sources: Vedas, Upanishads, shastras, oral traditions, manuscripts.
- Fourteen vidyas / 64 kalas as traditional classifications of knowledge.

★ Key revision points

- IKS division: 2020.
- NEP 2020 promotes IKS.
- 64 kalas.
- Knowledge passed through guru–shishya parampara.

UNIT 02

Language and Grammar

Sanskrit grammar and linguistic tradition.

- Panini — *Ashtadhyayi* (about 4,000 sutras, 8 chapters).
- Katyayana (vartikas) and Patanjali (*Mahabhashya*) — the trimuni.
- Bhartrihari — *Vakyapadiya*, sphota theory.

★ Key revision points

- *Ashtadhyayi* = Panini.
- *Mahabhashya* = Patanjali.
- Sphota = Bhartrihari.
- Trimuni of grammar.

UNIT 03

Mathematics

Indian contributions to mathematics.

Scholar	Contribution
Baudhayana	Shulba Sutra — right-triangle theorem
Aryabhata	*Aryabhatiya* (499 CE); place value; π ≈ 3.1416
Brahmagupta	Rules for zero; *Brahmasphutasiddhanta* (628 CE)
Bhaskara II	*Lilavati*, *Bijaganita*
Madhava (Kerala school)	Infinite series for π and trigonometric functions

★ Key revision points

- Rules for zero = Brahmagupta.
- *Aryabhatiya*: 499 CE.
- *Lilavati* = Bhaskara II.
- Infinite series = Madhava.

UNIT 04

Astronomy

Jyotisha and Indian astronomy.

- *Vedanga Jyotisha* — Lagadha.
- Aryabhata: earth rotates on its axis; explanation of eclipses.
- Varahamihira — *Pancha Siddhantika*, *Brihat Samhita*; Jantar Mantar observatories (Sawai Jai Singh II).

★ Key revision points

- *Vedanga Jyotisha* = Lagadha.
- Earth's rotation = Aryabhata.
- *Pancha Siddhantika* = Varahamihira.
- Jantar Mantar = Jai Singh II.

UNIT 05

Health Sciences

Ayurveda and other systems.

- *Charaka Samhita* (medicine); *Sushruta Samhita* (surgery — rhinoplasty); Vagbhata's *Ashtanga Hridaya*.
- Tridosha: vata, pitta, kapha; eight branches (ashtanga ayurveda).
- Siddha, Unani, Sowa-Rigpa, yoga; AYUSH systems.

★ Key revision points

- Surgery = Sushruta.
- Medicine = Charaka.
- Eight branches of Ayurveda.
- Tridosha theory.

UNIT 06

Philosophy and Logic

Darshanas, pramanas and debate.

- Astika and nastika schools (Buddhism, Jainism, Charvaka).
- Pramanas: pratyaksha, anumana, upamana, shabda, arthapatti, anupalabdhi.
- Nyaya five-step inference; vada, jalpa, vitanda as types of debate.

★ Key revision points

- Six pramanas (Mimamsa/Vedanta).
- Charvaka accepts only perception.
- Five-step Nyaya inference.
- Vada = honest debate.

UNIT 07

Science, Metallurgy and Technology

Technical achievements.

- Iron Pillar, Delhi (rust-resistant); wootz steel.
- Zinc distillation at Zawar (Rajasthan).
- Rasashastra (alchemy), Nagarjuna; Kanada's atomism.

★ Key revision points

- Iron Pillar resists rust.
- Wootz steel from south India.
- Zinc distillation = Zawar.
- Atomism = Kanada.

UNIT 08

Architecture and Town Planning

Vastu, shilpa and town planning.

- Harappan grid planning, drainage.
- Vastu Shastra; *Mayamata*, *Manasara*; *Samarangana Sutradhara* (Raja Bhoja).
- Stepwells (Rani ki Vav), temple styles (Nagara, Dravida, Vesara).

★ Key revision points

- Harappan grid planning.
- *Samarangana Sutradhara* = Bhoja.
- Rani ki Vav = Patan.
- Vastu guides building.

UNIT 09

Polity, Economy and Society

Traditional ideas of governance and economy.

- Kautilya's *Arthashastra*; saptanga state; dharma as basis of governance.
- Guilds (shreni); trade networks; sabha and samiti.
- Education: Takshashila, Nalanda (UNESCO site), Vikramashila.

★ Key revision points

- Saptanga = Kautilya.
- Shreni = guild.
- Nalanda = UNESCO site.
- Sabha and samiti = Vedic assemblies.

UNIT 10

Arts, Agriculture and Environment

Arts, agricultural knowledge and ecology.

- *Natyashastra* (Bharata) — rasa theory; music, dance.
- Krishi Parashara; Vrikshayurveda (plant science).
- Sacred groves; water harvesting (johads, kunds, eris).

★ Key revision points

- *Natyashastra* = Bharata.
- Vrikshayurveda = plant science.
- Sacred groves conserve biodiversity.
- Eris = Tamil Nadu tanks.

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